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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,543	10/12/2001	Genady Grabarnik	YOR920010748US1	1486

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EXAMINER
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LIN, KELVIN Y

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/976,543

Applicant(s)

GRABARNIK ET AL.

Examiner

Kelvin Lin

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **Detailed Action**

### ***Response to Arguments***

Application's argue with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-3, 12, 14-27 are rejected under 35 USC 102(e) as being anticipated by Riosa et al., (U.S. PG Pub No. 2002/0120734).
2. Regarding claim 1, Riosa teaches a method for use in accordance with an event management system, the method comprising the steps of:
  - automatically generating one or more event relationship network from event data, wherein an event relationship network comprises a graphical representation wherein nodes

representing events and links connecting correlated nodes

(Riosa, Abstract, I.1-4, [0014], [0023], I.1-5); and

- utilizing the one or more generated event relationship networks to construct one or more correlation rules for use by a correlation engine in the event management system (Riosa, [0008], I.12-15, [0021], I.1-7, [0107]).

3. Regarding claim 2, Riosa further discloses the method of claim 1, further comprising the step of subjecting the one or more generated event relationship networks to human review prior to utilizing the one or more generated event relationship networks to construct the one or more correlation rules (Riosa, [0036], I.6-18).

4. Regarding claim 3, Riosa further discloses the method of claim 1, wherein, when one or more previously generated event relationship networks are available, the step of automatically generating one or more event relationship networks comprises:

- obtaining one or more previously generated event relationship networks (Riosa, [0070]);
- validating the one or more previously generated event relationship networks by removing any nodes or links included therein that are incorrect for a particular application context (Riosa, [0037], I.6-12);

Art Unit: 2142

- completing the one or more previously generated event relationship networks by adding any nodes or links thereto that are missing for the particular application context (Riosa, [0117], l.10-13);
  - outputting the one or more validated and completed event relationship networks as the one or more event relationship networks used to construct the one or more correlation rules (Riosa, [0112]-[0116]).
5. Regarding claim 12, Riosa further discloses the method of claim 1, wherein the one or more event relationship networks comprise annotations relating to statistical correlation between nodes (Riosa, [0102] ).
6. Regarding claims 14-26 have similar limitations as claims 1-13. Therefore, they are rejected for the same reasons set forth in the rejection of claims 1-13.
7. Regarding claim 27 has similar limitations as claim 1. Therefore, it is rejected for the same reasons set forth in the rejection of claim 1.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been

Art Unit: 2142

obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4-11, 13 are rejected under 35 U.S.C 103(a) as being unpatentable over Riosa in view of Yemini (US Patent 6249755).
9. Regarding claims 4, Riosa differs from the claimed invention in that Riosa does not disclose the statistical correlation analysis. However, Yemini further discloses the method of claim 3, wherein the validating and completing steps utilize a statistical correlation analysis (Yemini, col.13, l.10-20).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to include the teaching of Yemini for event correlation analysis by using graphic model (Yemini, col.17, l.40-50 col.24, l.29-37).

The motivation would be for Riosa to implement statistical correlation analysis in the graphic model using Yemini probabilistic and temporal code because in Riosa's model the event relationship can be treated not as a linear flow of events (statistical analysis corresponds to the nonlinear flow of event, but rather as a hierarchical connected graph (Riosa, [0023]).

10. Regarding claim 5, Yemini further discloses the method of claim 4, wherein the statistical correlation analysis utilizes pairwise correlation analysis, wherein correlation between a pair of events is measured in accordance with one or more statistical measurements (Yemini, col.17,

Art Unit: 2142

I.59-65).

11. Regarding claim 6, Yemini further discloses the method of claim 3, wherein the validating step comprises, for a particular event relationship network, determining that links in the event relationship network have a confidence level not less than a given threshold (Yemini, col.25, I.9-19).
12. Regarding claim 7, Yemini further discloses the method of claim 3, wherein the validating step, for a particular event relationship network, comprises:
  - splitting the event relationship network into correlation paths (Yemini, col.19, I.23-33, in which the classifies corresponds to split);
  - for every correlation path, removing a node that has the least number of correlated nodes associated therewith until every node is fully correlated with every other node (Yemini, col.25, I.9-13); and
  - merging correlation paths into one or more event relationship networks such that every path in a resulting event relationship network has every node fully correlated with every other node in the path (Yemini, col.17, I.59-65).
13. Regarding claim 8, Yemini further discloses the method of claim 1, wherein, when one or more previously generated event relationship networks are not available, the step of automatically generating one or

Art Unit: 2142

more event relationship networks comprises:

- mining patterns from the event data (Yemini, col.15, I.17-23);
- utilizing the mined patterns to construct the one or more event relationship networks (Yemini, col.15, I.24-35);
- outputting the one or more event relationship networks constructed from the mined patterns as the one or more event relationship networks used to construct the one or more correlation rules (Yemini, col.20, I.57-65).

14. Regarding claim 9, Yemini further discloses the method of claim 8, wherein the constructing step utilizes a statistical correlation analysis to mine patterns (Yemini, col.21, I.1-42).
15. Regarding claim 10, Yemini further discloses the method of claim 8, wherein the statistical correlation analysis utilizes pairwise correlation analysis, wherein correlation between a pair of events is measured in accordance with one or more statistical measurements (Yemini, col.17, I.59-65).
16. Regarding claim 11, Yemini further discloses the method of claim 1, wherein the event data is obtained from an event log representing historical events associated with a particular system being managed by the event management system (Yemini, col.11, I.32-36, col.24, I.57-67, col.25, I.1-8).
17. Regarding claim 13, Yemini further discloses the method of claim 1,



Art Unit: 2142

wherein the event data is preprocessed prior to use in generating the one or more event relationship networks by removing at least a portion of any redundant events (Yemini, col.8, l.7-10).

### ***Conclusion***

Application's amendment necessitated the new ground(s) of rejection presented in this Office action, Accordingly, **THIS ACTION IS MADE FINAL.** See MEPE 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first replay is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE MONTH** shortened statutory period, then the shortened statutory period will expire on the date advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTH** from the date of this final action.

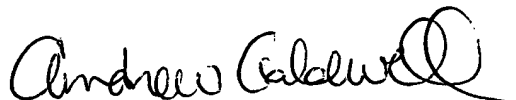
Art Unit: 2142

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelvin Lin whose telephone number is 571-272-3898. The examiner can normally be reached on Flexible 4/9/5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

06/28/05  
KYL



**ANDREW CALDWELL**  
**SUPERVISORY PATENT EXAMINER**